

REMARKS

Headings are being added to the specification as requested by the Examiner. However, applicant would respectfully remind the Examiner that such headings are a matter of choice, not a requirement of the statute, rules or MPEP.

The election made by telephone on May 5, 2003 is affirmed.

Claims 5, 6, 11 and 12 are being amended to specify that the percentages are by weight, and applicant trusts that the rejection of those claims under 35 U.S.C. §112 will be withdrawn.

Claims 1, 2, 4 - 8 and 10 - 12 have been rejected under 35 U.S.C. §102 as being anticipated by Dery et al. (U.S. 4,640,981). Reconsideration and withdrawal of that rejection is requested.

Applicant's invention is fundamentally different than the device shown in Dery et al. in that it is a resistive element for a potentiometer or other type of variable resistor involving a sliding contact, whereas Dery et al. is concerned with electrical connections in which there is no movement. It is designed to reduce the surface resistance of the sliding contact and the contact resistance that normally occurs when a metal contact touches a semiconductive resistor film.

Dery et al. teaches the use of an insulating polymer with two groups of conductive particles therein on the surface of a substrate, with an insulating layer of flowable adhesive covering the conductive particles. An interconnection is made by pressing two such substrates together so particles on the two substrates are exposed and brought into contact with each other, and the adhesive which is displaced from between the particles bonds the two substrates together.

This important difference is reflected in the size of the particles used in the two applications. In Dery et al., the particles range in size from 15 to 90 micrometers, with 30 - 46 micrometers being preferred (Col. 3, lines 52 - 57), whereas in applicant's invention, they are only about 6 microns or less.

Claim 1 is being amended in order to more clearly reflect the important difference. As amended, it distinguishes over Dery et al. in being directed specifically to a conductive plastic resistance element for a variable resistor, which Dery et al. is not,

and in calling for particles of conductive material no larger than about 6 microns embedded therein and projecting therefrom for sliding contact with the wiper contact of the variable resistor.

Claims 2 and 4 - 6 depend from Claim 1 and are directed to patentable subject matter for the same reasons as their amended parent claim.

Claim 7 likewise distinguishes over Dery et al. initially in that it is directed to a resistance element for use in a potentiometric device having a wiper contact which engages the resistance element. It further distinguishes in defining that element as comprising a carbon/plastic matrix with conductive phases for reducing variations in resistance between the wiper contact and the resistance element over the life of the device. As noted above, Dery et al. does not disclose a resistance element for use in a potentiometric device, and it likewise does not disclose a carbon/plastic matrix with conductive phases for reducing variations in resistance between the wiper contact and the resistance element. Without those elements, Dery et al. does not anticipate, and the rejection is clearly erroneous.

Claims 8 and 10 - 12 depend from Claim 7 and are directed to patentable subject matter for the same reasons as their parent claim.

Claims 7 - 10 have also been rejected under 35 U.S.C. §102 as being anticipated by Bosze et al. (U.S. 4,732,802). That rejection is likewise erroneous.

Bosze et al. is not concerned with a plastic resistance element in which conductive phases are embedded, but rather with a cermet (ceramic and metal) substrate, with so-called islands of conductive material deposited on the surface of the substrate.

Claim 7 distinguishes over Bosze et al. in calling for a carbon/plastic matrix with conductive phases for reducing variations in resistance between the wiper contact and the resistance element. Without those elements, Bosze et al. does not anticipate, and the rejection is clearly erroneous.

Claims 8 - 10 depend from Claim 7 and are directed to patentable subject matter for the same reasons as their parent claim.

Finally, Claims 3 and 9 have been rejected under 35 U.S.C. §103 as being unpatentable over the combined teachings of Dery et al. and Bosze et al. That rejection is also erroneous.

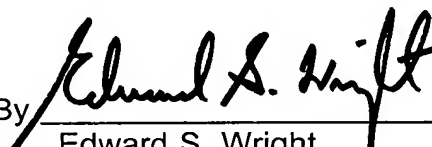
Claims 3 and 9 depend from Claims 1 and 7 distinguish over Dery et al. for the same reasons as their parent claims. In addition, as the Examiner has acknowledged, they further distinguishes in that Dery et al. fails to teach the use of a conductive material consisting of silver and palladium.

The Examiner cannot overcome this deficiency by selectively combining the teachings of the two references as she has attempted to do. Dery et al. and Bosze et al. are directed to two entirely types of devices, and there is no reason to think that the elements of one will work in the other. There is no motivation for the combination in the prior art, and this appears to be a clear case of hindsight reconstruction in which the Examiner has used applicant's own disclosure and claims as a blueprint for picking and choosing various elements from different references in an attempt to produce what is claimed. Moreover, even if conductive materials disclosed in Bosze et al. were substituted for the conductive materials of Dery et al., the result would not be the resistive element of applicant's invention, but rather an electrical interconnect with the materials of Bosze et al. Hence, the rejection is clearly erroneous, and applicant trusts that it will be withdrawn.

With this amendment, all of the claims which have been examined are directed to patentable subject matter, and the application should be in condition for allowance.

The Commissioner is authorized to charge any fees which may be required in this matter, including extension fees, to Deposit Account 50-2319, Order No. A-70431/ESW.

Respectfully submitted,

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